DAIKIN

INSTALLATION MANUAL

Packaged water-cooled water chillers

HYDROCUBE

EWWP014KBW1N
EWWP022KBW1N
EWWP028KBW1N
EWWP035KBW1N
EWWP045KBW1N
EWWP055KBW1N
EWWP065KBW1N

CE - DECLARATION-OF-CONFORMITY
CE - KONFORMITÄTSERKLÄRUNG
CE - DECLARATION-DE-CONFORMITE
CE - CONFORMITEITSVERKLARING
CE - DECLARACION-DE-CONFORMIDAD
CE - DICHIARAZIONE-DI-CONFORMITA
CE - ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ
CE - DECLARAÇÃO-DE-CONFORMIDADE
CE - ЗАЯВЛЕНИЕ-О-СООТВЕТСТВИИ
CE - OPFYLDELSESERKLÆRING
CE - FÖRSÄKRAN-OM-ÖVERENSTÄMMELSE
CE - ERKLÆRING OM-SAMSVAR
CE - ILMOITUS-YHDENMUKAISUUDESTA
CE - PROHLÁŠENÍ-O-SHODĚ
CE - IZJAVA-O-USKLAĐENOSTI
CE - MEGFELELŐSÉGI-NYILATKOZAT
CE - DEKLARACJA-ZGODNOŚCI
CE - DECLARAŢIE-DE-CONFORMITATE
CE - IZJAVA O SKLADNOSTI
CE - VASTAVUSDEKLARATSIOON
CE - ДЕКЛАРАЦИЯ-ЗА-СЪОТВЕТСТВИЕ
CE - ATITIKTIES-DEKLARACIJA
CE - ATBILSTĪBAS-DEKLARĀCIJA
CE - VYHLÁSENIE-ZHODY
CE - UYUMLULUK-BİLDİRİSİ

Daikin Europe N.V.

01 (GB) declares under its sole responsibility that the air conditioning models to which this declaration relates:
02 (D) erklärt auf seine alleinige Verantwortung daß die Modelle der Klimageräte für die diese Erklärung bestimmt ist:
03 (F) déclare sous sa seule responsabilité que les appareils d'air conditionné visés par la présente déclaration:
04 (NL) verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de airconditioning units waarop deze verklaring betrekking heeft:
05 (E) declara baja su única responsabilidad que los modelos de aire acondicionado a los cuales hace referencia la declaración:
06 (I) dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:
07 (GR) δηλώνει με αποκλειστική της ευθύνη ότι τα μοντέλα των κλιματιστικών συσκευών στα οποία αναφέρεται η παρούσα δήλωση:
08 (P) declara sob sua exclusiva responsabilidade que os modelos de ar condicionado a que esta declaração se refere:
09 (RUS) заявляет, исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящее заявление:
10 (DK) erklærer under eneansvar, at klimaanlægmodellerne, som denne deklaration vedrører:
11 (S) deklarerar i egenskap av huvudansvarig, att luftkonditioneringsmodellerna som berörs av denna deklaration innebär att:
12 (N) erklærer et fullstendig ansvar for at de luftkondisjoneringsmodeller som berøres av denne deklarasjon innebærer at:
13 (FIN) ilmoittaa yksinomaan omalla vastuullaan, että tämän ilmoituksen tarkoittamat ilmastointilaitteiden mallit:
14 (CZ) prohlašuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje:
15 (HR) izjavljuje pod isključivo vlastitom odgovornošću da su modeli klima uređaja na koje se ova izjava odnosi:
16 (H) teljes felelőssége tudatában kijelenti, hogy a klímaberendezés modellek, melyekre e nyilatkozat vonatkozik:
17 (PL) deklaruje na własną i wyłączną odpowiedzialność, że modele klimatyzatorów, których dotyczy niniejsza deklaracja:
18 (RO) declară pe proprie răspundere că aparatele de aer condiţionat la care se referă această declaraţie:
19 (SLO) z vso odgovornostjo izjavlja, da so modeli klimatskih naprav, na katere se izjava nanaša:
20 (EST) kinnitab oma täielikul vastutusel, et käesoleva deklaratsiooni alla kuuluvad kliimaseadmete mudelid:
21 (BG) декларира на своя отговорност, че моделите климатична инсталация, за които се отнася тази декларация:
22 (LT) visiška savo atsakomybe skelbia, kad oro kondicionavimo prietaisų modeliai, kuriems yra taikoma ši deklaracija:
23 (LV) ar pilnu atbildību apliecina, ka tālāk uzskaitīto modeļu gaisa kondicionētāji, uz kuriem attiecas šī deklārācija:
24 (SK) vyhlasuje na vlastnú zodpovednosť, že tieto klimatizačné modely, na ktoré sa vzťahuje toto vyhlásenie:
25 (TR) tamamen kendi sorumluluğunda olmak üzere bu bildirinin ilgili olduğu klima modellerinin aşağıdaki gibi olduğunu beyan eder:

EWWP014KBW1N*, EWWP022KBW1N***, EWWP028KBW1N***, EWWP035KBW1N***, EWWP045KBW1N***, EWWP055KBW1N***, EWWP065KBW1N***,**
* = , , -, 1, 2, 3, ..., 9, A, B, C, ..., Z

01 are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our instructions:
02 der/den folgenden Norm(en) oder einem anderen Normdokument oder -dokumenten entspricht/entsprechen, unter der Voraussetzung, daß sie gemäß unseren Anweisungen eingesetzt werden:
03 sont conformes à la/aux norme(s) ou autre(s) document(s) normatif(s), pour autant qu'ils soient utilisés conformément à nos instructions:
04 conform de volgende norm(en) of één of meer andere bindende documenten zijn, op voorwaarde dat ze worden gebruikt overeenkomstig onze instructies:
05 están en conformidad con la(s) siguiente(s) norma(s) u otro(s) documento(s) normativo(s), siempre que sean utilizados de acuerdo con nuestras instrucciones:
06 sono conformi al(i) seguente(i) standard(s) o altro(i) documento(i) a carattere normativo, a patto che vengano usati in conformità alle nostre istruzioni:
07 είναι σύμφωνα με το(α) ακόλουθο(α) πρότυπο(α) ή άλλο έγγραφο(α) κανονισμών, υπό την προϋπόθεση ότι χρησιμοποιούνται σύμφωνα με τις οδηγίες μας:
08 estão em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de acordo com as nossas instruções:
09 соответствуют следующим стандартам или другим нормативным документам, при условии их использования согласно нашим инструкциям:
10 overholder følgende standard(er) eller andet/andre retningsgivende dokument(er), forudsat at disse anvendes i henhold til vore instrukser:
11 respektive utrustning är utförd i överensstämmelse med och följer följande standard(er) eller andra normgivande dokument, under förutsättning att användning sker i överensstämmelse med våra instruktioner:
12 respektive utstyr er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forutssetning av at disse brukes i henhold til våre instrukser:
13 vastaavat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksia edellyttäen, että niitä käytetään ohjeidemme mukaisesti:
14 za předpokladu, že jsou využívány v souladu s našimi pokyny, odpovídají následujícím normám nebo normativním dokumentům:
15 u skladu sa slijedećim standardom(ima) ili drugim normativnim dokumentom(ima), uz uvjet da se oni koriste u skladu s našim uputama:
16 megfelelnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerint használják:
17 spełniają wymogi następujących norm i innych dokumentów normalizacyjnych, pod warunkiem że używane są zgodnie z naszymi instrukcjami:
18 sunt în conformitate cu următorul (următoarele) standard(e) sau alt(e) document(e) normativ(e), cu condiţia ca acestea să fie utilizate în conformitate cu instrucţiunile noastre
19 skladni z naslednjimi standardi in drugimi normativi, pod pogojem, da se uporabljajo v skladu z našimi navodili:
20 on vastavuses järgmis(t)e standardi(te)ga või teiste normatiivsete dokumentidega, kui neid kasutatakse vastavalt meie juhenditele:
21 съответстват на следните стандарти или други нормативни документи, при условие, че се използват съгласно нашите инструкции:
22 atitinka žemiau nurodytus standartus ir (arba) kitus norminius dokumentus su sąlyga, kad yra naudojami pagal mūsų nurodymus:
23 tad, ja lietoti atbilstoši ražotāja norādījumiem, atbilst sekojošiem standartiem un citiem normatīviem dokumentiem:
24 sú v zhode s nasledovnou(ými) normou(ami) alebo iným(i) normatívnym(i) dokumentom(ami), za predpokladu, že sa používajú v súlade s našim návodom:
25 ürünün, talimatlarımıza göre kullanılması koşuluyla aşağıdaki standartlar ve norm belirten belgelerle uyumludur:

EN60335-2-40,

01 following the provisions of:
02 gemäß den Vorschriften der:
03 conformément aux stipulations des:
04 overeenkomstig de bepalingen van:
05 siguiendo las disposiciones de:
06 secondo le prescrizioni per:
07 με τήρηση των διατάξεων των:
08 de acordo com o previsto em:
09 в соответствии с положениями:
10 under iagttagelse af bestemmelserne i:
11 enligt villkoren i:
12 gitt i henhold til bestemmelsene i:
13 noudattaen määräyksiä:
14 za dodržení ustanovení předpisu:
15 prema odredbama:
16 követi a(z):
17 zgodnie z postanowieniami Dyrektyw:
18 în urma prevederilor:
19 ob upoštevanju določb:
20 vastavalt nõuetele:
21 следвайки клаузите на:
22 laikantis nuostatų, pateikiamų:
23 ievērojot prasības, kas noteiktas:
24 održiavajúc ustanovenia:
25 bunun koşullarına uygun olarak:

Machinery 2006/42/EC **
Electromagnetic Compatibility 2004/108/EC *

01 Directives, as amended.
02 Direktiven, gemäß Änderung.
03 Directives, telles que modifiées.
04 Richtlijnen, zoals geamendeerd.
05 Directivas, según lo enmendado.
06 Direttive, come da modifica.
07 Οδηγιών, όπως έχουν τροποποιηθεί.
08 Directivas, conforme alteração em.
09 Директив со всеми поправками.
10 Direktiver, med senere ændringer.
11 Direktiv, med företagna ändringar.
12 Direktiver, med foretatte endringer.
13 Direktiivejä, sellaisina kuin ne ovat muutettuina.
14 v platném znění.
15 Smjernice, kako je izmijenjeno.
16 irányelv(ek) és módosításaik rendelkezéseit.
17 z późniejszymi poprawkami.
18 Directivelor, cu amendamentele respective.
19 Direktive z vsemi spremembami.
20 Direktiivid koos muudatustega.
21 Директиви, с техните изменения.
22 Direktyvose su papildymais.
23 Direktīvās un to papildinājumos.
24 Smernice, v platnom znení.
25 Değiştirilmiş halleriyle Yönetmelikler.

01 **Note *** as set out in <A> and judged positively by <B> according to the **Certificate** <C>.
02 **Hinweis *** wie in der <A> aufgeführt und von <B> positiv beurteilt gemäß **Zertifikat** <C>.
03 **Remarque *** tel que défini dans <A> et évalué positivement par <B> conformément au **Certificat** <C>.
04 **Bemerk *** zoals vermeld in <A> en positief beoordeeld door <B> overeenkomstig **Certificaat** <C>.
05 **Nota *** como se establece en <A> y es valorado positivamente por <B> de acuerdo con el **Certificado** <C>.
06 **Nota *** delineato nel <A> e giudicato positivamente da <B> secondo il **Certificato** <C>.
07 **Σημείωση *** όπως καθορίζεται στο <A> και κρίνεται θετικά από το <B> σύμφωνα με το **Πιστοποιητικό** <C>.
08 **Nota *** tal como estabelecido em <A> e com o parecer positivo de <B> de acordo com o **Certificado** <C>.
09 **Примечание *** как указано в <A> и в соответствии с положительным решением <B> согласно **Свидетельству** <C>.
10 **Bemærk *** som anført i <A> og positivt vurderet af <B> i henhold til **Certifikat** <C>.
11 **Information *** enligt <A> och godkänts av <B> enligt **Certifikatet** <C>.
12 **Merk *** som det fremkommer i <A> og gjennom positiv bedømmelse av <B> ifølge **Sertifikat** <C>.
13 **Huom *** jotka on esitetty asiakirjassa <A> ja jotka <B> on hyväksynyt **Sertifikaatin** <C> mukaisesti.
14 **Poznámka *** jak bylo uvedeno v <A> a pozitivně zjištěno <B> v souladu s **osvědčením** <C>.
15 **Napomena *** kako je izloženo u <A> i pozitivno ocijenjeno od strane <B> prema **Certifikatu** <C>.
16 **Megjegyzés *** a(z) <A> alapján, a(z) <B> igazolta a megfelelést, a(z) <C> **tanúsítvány** szerint.
17 **Uwaga *** zgodnie z dokumentacją <A>, pozytywną opinią <B> i **Świadectwem** <C>.
18 **Notă *** aşa cum este stabilit în <A> şi apreciat pozitiv de <B> în conformitate cu **Certificatul** <C>.
19 **Opomba *** kot je določeno v <A> in odobreno s strani <B> v skladu s **certifikatom** <C>.
20 **Märkus *** nagu on näidatud dokumendis <A> ja heaks kiidetud <B> järgi vastavalt **sertifikaadile** <C>.
21 **Забележка *** както е изложено в <A> и оценено положително от <B> съгласно **Сертификата** <C>.
22 **Pastaba *** kaip nustatyta <A> ir kaip teigiamai nuspręsta <B> pagal **Sertifikatą** <C>.
23 **Piezīmes *** kā norādīts <A> un atbilstoši <B> pozitīvajam vērtējumam saskaņā ar **sertifikātu** <C>.
24 **Poznámka *** ako bolo uvedené v <A> a pozitívne zistené <B> v súlade s **osvedčením** <C>.
25 **Not *** <A>'da belirtildiği gibi ve <C> **Sertifikasına** göre <B> tarafından olumlu olarak değerlendirildiği gibi.

<A>	DAIKIN.TCF.012H4/04-2010
<B>	KEMA (NB0344)
<C>	63329-KRQ/ECM96-5256

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02 ** Daikin Europe N.V. hat die Berechtigung die Technische Konstruktionsakte zusammenzustellen.
03 ** Daikin Europe N.V. est autorisé à compiler le Dossier de Construction Technique.
04 ** Daikin Europe N.V. is bevoegd om het Technisch Constructiedossier samen te stellen.
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11 ** Daikin Europe N.V. är bemyndigade att sammanställa den tekniska konstruktionsfilen.
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15 ** Daikin Europe N.V. je ovlašten za izradu Datoteke o tehničkoj konstrukciji.
16 ** A Daikin Europe N.V. jogosult a műszaki konstrukciós dokumentáció összeállítására.
17 ** Daikin Europe N.V. ma upoważnienie do zbierania i opracowywania dokumentacji konstrukcyjnej.
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24 ** Spoločnosť Daikin Europe N.V. je oprávnená vytvoriť súbor technickej konštrukcie.
25 ** Daikin Europe N.V. Teknik Yapı Dosyasını derlemeye yetkilidir.

DAIKIN

Jean-Pierre Beuselinck
General Manager
Ostend, 1st of July 2010

DAIKIN EUROPE N.V.
Zandvoordestraat 300, B-8400 Oostende, Belgium

3PW61842-3

CONTENTS

Thank you for purchasing this Daikin air conditioner.

READ THIS MANUAL ATTENTIVELY BEFORE STARTING UP THE UNIT. DO NOT THROW IT AWAY. KEEP IT IN YOUR FILES FOR FUTURE REFERENCE.

IMPROPER INSTALLATION OR ATTACHMENT OF EQUIPMENT OR ACCESSORIES COULD RESULT IN ELECTRIC SHOCK, SHORT-CIRCUIT, LEAKS, FIRE OR OTHER DAMAGE TO THE EQUIPMENT. BE SURE ONLY TO USE ACCESSORIES, OPTIONAL EQUIPMENT AND SPARE PARTS MADE BY DAIKIN WHICH ARE SPECIFICALLY DESIGNED FOR USE WITH THE EQUIPMENT AND HAVE THEM INSTALLED BY A PROFESSIONAL.

IF UNSURE OF INSTALLATION PROCEDURES OR USE, ALWAYS CONTACT YOUR DAIKIN DEALER FOR ADVICE AND INFORMATION.

The English text is the original instruction. Other languages are translations of the original instructions.

INTRODUCTION

The Daikin EWWP-KB packaged water-cooled water chillers are designed for indoor installation and used for cooling and/or heating applications. The units are available in 7 standard sizes with nominal cooling capacities ranging from 13 to 65 kW.

The EWWP units can be combined with Daikin fan coil units or air handling units for air conditioning purposes. They can also be used for supplying chilled water for process cooling.

The present installation manual describes the procedures for unpacking, installing and connecting the EWWP units.

This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.

Sound pressure level is less than 70 dB(A).

Technical specifications[(1)]

Model EWWP		014	022	028	035
Dimensions HxWxD	(mm)	600x600x600			
Machine weight	(kg)	113	150	160	167
Connections					
• chilled water inlet and outlet	(inch)	G 1			
• condenser water inlet and outlet	(inch)	G 1			

Model EWWP		045	055	065
Dimensions HxWxD	(mm)	600x600x1200		
Machine weight	(kg)	300	320	334
Connections				
• chilled water inlet and outlet	(inch)	G 1-1/2		
• condenser water inlet and outlet	(inch)	G 1-1/2		

Electrical specifications[(1)]

Model EWWP		014~065
Power circuit		
• Phase		3N~
• Frequency	(Hz)	50
• Voltage	(V)	400
• Voltage tolerance	(%)	±10

Options and features[(1)]

Options

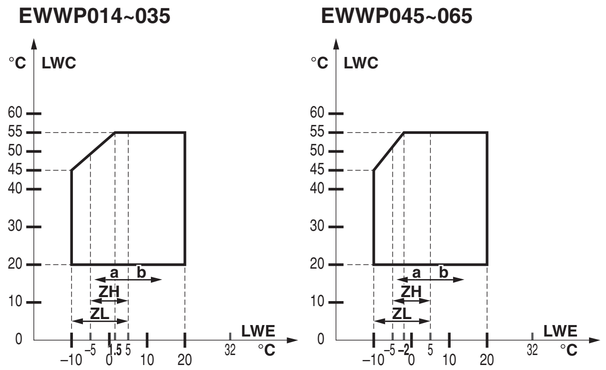
- Glycol application for chilled water temperature down to –10°C or –5°C.
- BMS-connection MODBUS (optional kit address card EKAC10C)[(2)]
- Remote user interface (optional kit EKRUMCA). (Necessary to additionally install kit address card EKAC10C.)[(2)]
- Low noise operation kit (field installed)

Features

- Voltage free contacts
  - general operation
  - alarm
  - operation compressor 1
  - operation compressor 2
- Changeable remote inputs
  Following functions can be assigned to a total of 2 digital inputs.
  - remote start/stop
  - remote cooling/heating
  - dual setpoint

(1) Refer to the operation manual or engineering data book for the complete list of specifications, options and features.
(2) When EKAC10C is used in combination with remote user controller EKRUMCA then it is not possible to use the BMS-connection MODBUS.

OPERATION RANGE



LWC	Leaving water temperature condenser
LWE	Leaving water temperature evaporator
a	Glycol
b	Water
▭	Continuous operation range

MAIN COMPONENTS (refer to the outlook diagram supplied with the unit)

1 Compressor
2 Evaporator
3 Condenser
4 Switchbox
5 Chilled water in
6 Chilled water out
7 Condenser water out
8 Condenser water in
9 Evaporator entering water temperature sensor
10 Freeze up sensor
11 Condenser entering water temperature sensor
12 Digital display controller
13 Power supply intake
14 Ball valve (field installed)
15 Water filter (field installed)
16 Air purge valve (field installed)
17 T-joint for air purge (field installed)
18 flowswitch (with T-joint) (field installed)
19 Main switch

SELECTION OF LOCATION

The units are designed for indoor installation and should be installed in a location that meets the following requirements:

1 The foundation is strong enough to support the weight of the unit and the floor is flat to prevent vibration and noise generation.
2 The space around the unit is adequate for servicing.
3 There is no danger of fire due to leakage of inflammable gas.
4 Select the location of the unit in such a way that the sound generated by the unit does not disturb anyone.
5 Ensure that water cannot cause any damage to the location in case it drips out of the unit.

The equipment is not intended for use in a potentially explosive atmosphere.

INSPECTING AND HANDLING THE UNIT

At delivery, the unit should be checked and any damage should be reported immediately to the carrier claims agent.

UNPACKING AND PLACING THE UNIT

1 Cut the straps and remove the cardboard box from the unit.
2 Cut the straps and remove the cardboard boxes with waterpiping from the pallet.
3 Remove the four screws fixing the unit to the pallet.
4 Level the unit in both directions.
5 Use four anchor bolts with M8 thread to fix the unit in concrete (directly or using the floor standing supports).
6 Remove the service front plate.

IMPORTANT INFORMATION REGARDING THE REFRIGERANT USED

This product contains fluorinated greenhouse gases covered by the Kyoto Protocol. Do not vent gases into the atmosphere.

Refrigerant type: R407C
GWP[1] value: 1652.5

[1] GWP = global warming potential

The refrigerant quantity is indicated on the unit name plate.

CHECKING THE WATER CIRCUIT

The units are equipped with water inlets and water outlets for connection to a chilled water circuit and to a hot water circuit. These circuits must be provided by a licensed technician and must comply with all relevant European and national regulations.

⚠ The unit is only to be used in a closed water system. Application in an open water circuit can lead to excessive corrosion of the water piping.

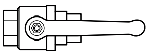
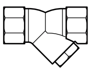
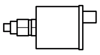
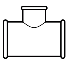
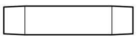
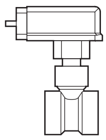
Before continuing the installation of the unit, check the following points:

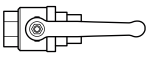
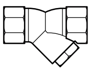
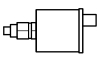
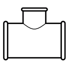
- **Additional components not delivered with the unit**

1 A circulation pump must be provided in such a way that it discharges the water directly into the heat exchanger.
2 Drain taps must be provided at all low points of the system to permit complete drainage of the circuit during maintenance or in case of shut down.
3 Vibration eliminators in all water piping connected to the chiller are recommended to avoid straining the piping and transmitting vibration and noise.

■ **Additional water piping delivered with the unit**

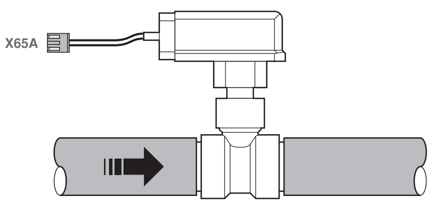
All additional water piping must be installed on the system according to the piping diagram as mentioned in the operation manual. The flowswitch must be connected as described on the wiring diagram. See also chapter "Before starting" on page 4.

Carton box 1	water piping evaporator
	2x Ball valve
	1x Water filter
	1x Air purge
	1x T-joint for air purge
	2x Flowswitch pipe
	1x Flowswitch + 1x T-joint

Carton box 2	water piping condenser
	2x Ball valve
	1x Water filter
	1x Air purge
	1x T-joint for air purge

1 The flowswitch must be installed in the water outlet pipe of the evaporator to prevent the unit from operating at a water flow which is too low.

> ⚠ It is very important to install the flowswitch as shown in the figure. Observe the position of the flowswitch in relation to the direction of the water flow. If the flowswitch is mounted in an other position, the unit is not protected properly against freezing.



A terminal (X65A) is provided in the switch box for the electrical connection of the flowswitch (S10L).

2 Shut-off valves must be installed at the unit so that normal servicing of the water filter can be accomplished without draining the complete system.

3 Air purge valves must be provided at all high points of the system. The vents should be located at points which are easily accessible for servicing.

4 The water filter must be installed in front of the unit for removing dirt from the water to prevent damage to the unit or blockage of the evaporator or condenser. The water filter must be cleaned on a regular base.

Water quality specifications

		evaporator water		condenser water		
		circulating water [<20°C]	supply water	circulating water [20°C~60°C]	supply water	tendency if out of criteria
Items to be controlled						
pH	at 25°C	6.8~8.0	6.8~8.0	7.0~8.0	7.0~8.0	A + B
Electrical conductivity	[mS/m] at 25°C	<40	<30	<30	<30	A + B
Chloride ion	[mg Cl^-/l]	<50	<50	<50	<50	A
Sulfate ion	[mg SO_4^{2-}/l]	<50	<50	<50	<50	A
M-alkalinity (pH 4.8)	[mg $CaCO_3$/l]	<50	<50	<50	<50	B
Total hardness	[mg $CaCO_3$/l]	<70	<70	<70	<70	B
Calcium hardness	[mg $CaCO_3$/l]	<50	<50	<50	<50	B
Silica ion	[mg SiO_2/l]	<30	<30	<30	<30	B
Items to be referred to						
Iron	[mg Fe/l]	<1.0	<0.3	<1.0	<0.3	A + B
Copper	[mg Cu/l]	<1.0	<0.1	<1.0	<0.1	A
Sulfide ion	[mg S^{2-}/l]	not detectable				A
Ammonium ion	[mg NH_4^+/l]	<1.0	<0.1	<0.3	<0.1	A
Remaining chloride	[mg Cl/l]	<0.3	<0.3	<0.25	<0.3	A
Free carbide	[mg CO_2/l]	<4.0	<4.0	<0.4	<4.0	A
Stability index		—	—	—	—	A + B

A = corrosion B = scale

Connecting the water circuit

The evaporator and condenser are foreseen of GAS male pipe thread for the water inlet and outlet (refer to the outlook diagram). Evaporator and condenser water connections are to be made in accordance with the outlook diagram, respecting the water in- and outlet.

If air, moisture or dust gets in the water circuit, problems may occur. Therefore, always take into account the following when connecting the water circuit:

1 Use clean pipes only.

2 Hold the pipe end downwards when removing burrs.

3 Cover the pipe end when inserting it through a wall so that no dust and dirt enter.

> ⚠
> - Use a good thread sealant for the sealing of the connections. The sealing must be able to withstand the pressures and temperatures of the system, it must also be resistant to the used glycol in the water.
> - The exterior of the water pipes must be adequately protected against corrosion.

Water charge, flow and quality

To assure proper operation of the unit a minimum water volume is required in the system and the water flow through the evaporator must be within the operation range as specified in the table below.

	Minimum water volume (l)	Minimum water flow	Maximum water flow
EWWP014	62	31 l/min	75 l/min
EWWP022	103	53 l/min	123 l/min
EWWP028	134	65 l/min	161 l/min
EWWP035	155	76 l/min	186 l/min
EWWP045	205	101 l/min	247 l/min
EWWP055	268	131 l/min	321 l/min
EWWP065	311	152 l/min	373 l/min

> The water pressure should not exceed the maximum working pressure of 10 bar.

> **NOTE** Provide adequate safeguards in the water circuit to make sure that the water pressure will never exceed the maximum allowable working pressure.

PIPING INSULATION

The complete water circuit, inclusive all piping, must be insulated to prevent condensation and reduction of the cooling capacity.

Protect the water piping against water freezing during winter period (e.g. by using a glycol solution or heatertape).

FIELD WIRING

> All field wiring and components must be installed by a licensed electrician and must comply with relevant European and national regulations.
>
> The field wiring must be carried out in accordance with the wiring diagram supplied with the unit and the instructions given below.
>
> Be sure to use a dedicated power circuit. Never use a power supply shared by another appliance.

Parts table

F1,2,3 ....Main fuses for the unit
H3P ....Indication lamp alarm
H4P, H5P................Indication lamp operation compressor circuit 1, circuit 2
PE ....Main earth terminal
S7S ....Remote cooling/heating change-over valve or dual setpoint
S9S ....Remote start/stop switch or dual setpoint
- - -...........................Field wiring

Power circuit and cable requirements

1 The electrical power supply to the unit must be arranged so that it can be switched on or off independently of the electrical supply to other items of the plant and equipment in general.

2 A power circuit must be provided for connection of the unit. This circuit must be protected with the required safety devices, i.e. a circuit breaker, a slow blow fuse on each phase and an earth leak detector. Recommended fuses are mentioned on the wiring diagram supplied with the unit.

> Switch off the main isolator switch before making any connections (switch off the circuit breaker, remove or switch off the fuses).

Connection of the water-cooled water chiller power supply

1 Using the appropriate cable, connect the power circuit to the N, L1, L2 and L3 terminals of the unit (cable section 2.5~10 mm^2).

2 Connect the earth conductor (yellow/green) to the earthing terminal PE.

Point for attention regarding quality of the public electric power supply

- This equipment complies with EN/IEC 61000-3-11[(1)] provided that the system impedance Z_{sys} is less than or equal to Z_{max} at the interface point between the user's supply and the public system. It is the responsibility of the installer or user of the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment is connected only to a supply with a system impedance Z_{sys} less than or equal to Z_{max}.

	Z_{max} (Ω)
EWWP014	0.28
EWWP022	0.23
EWWP028	0.22
EWWP035	0.21
EWWP045	0.22
EWWP055	0.21
EWWP065	0.20

- Only for EWWP028~065: Equipment complying with EN/IEC 61000-3-12[(2)]

Interconnection cables

- Voltage free contacts
  The PCB is provided with some voltage free contacts to indicate the status of the unit. These voltage free contacts can be wired as described on the wiring diagram.
- Remote inputs
  Besides the voltage free contacts, there are also possibilities to install remote inputs.
  They can be installed as shown on the wiring diagram.

BEFORE STARTING

> The unit should not be started, not even for a very short period of time, before the following pre-commissioning checklist is filled out completely.

tick ✓ when checked		standard steps to go through before starting the unit
☐	1	Check for **external damage**.
☐	2	Install **main fuses, earth leak detector** and **main switch**. Recommended fuses: aM according to IEC standard 269-2. *Refer to the wiring diagram for size.*
☐	3	Supply the main voltage and check if it is within the allowable ±10% limits of the nameplate rating. The electrical **main power supply** must be arranged so, that it can be switched on or off independently of the electrical supply to other items of the plant and equipment in general. *Refer to the wiring diagram, terminals N, L1, L2 and L3.*
☐	4	Supply water to the evaporator and verify if **waterflow** is within the limits as given in the table under "Water charge, flow and quality" on page 3.
☐	5	The piping must be completely **purged**. See also chapter "Checking the water circuit" on page 2.
☐	6	Connect the **flowswitch** and **pumpcontact**, so that the unit can only come in operation when the waterpumps are running and the waterflow is sufficient. Make sure a water filter is installed before the water inlet of the unit.
☐	7	Connect the optional field wiring for **pumps start-stop**.
☐	8	Connect the optional field wiring for **remote control**.

(1) European/International Technical Standard setting the limits for voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated current ≤75 A.
(2) European/International Technical Standard setting the limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤75 A per phase.

NOTE

- Try to reduce the drilling in the unit to a minimum. If drilling is impreventable, remove the iron filling thoroughly in order to prevent surface rust!
- It is necessary to read the operation manual delivered with the unit before operating the unit. It will contribute to understand the operation of the unit and its electronic controller.
- Verify on the wiring diagram all electrical actions mentioned above, in order to understand the operation of the unit more deeply.
- Close all switch box doors after installation of the unit.

I do confirm having executed and checked all the above mentioned items.

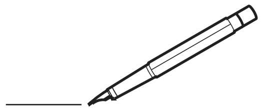
Date	**Signature**

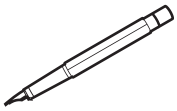
Keep for future reference.

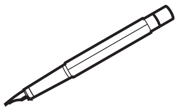
How to continue

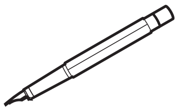
After installation and connection of the packaged water-cooled water chiller, the complete system must be checked and tested as described in "Checks before initial start-up" in the operation manual supplied with the unit.

Fill out the brief operation instructions form and fix it visibly near the operating site of the refrigeration system.









BRIEF OPERATION INSTRUCTIONS
EWWP-KB Packaged water-cooled water chiller

DAIKIN

Equipment supplier:

....

....

....

Phone:..

Service department:

....

....

....

Phone:..

EQUIPMENT TECHNICAL DATA

Manufacturer	: DAIKIN EUROPE	Power supply (V/Ph/Hz/A)	:..
Model	:	Maximum high pressure	:............................30.9 bar
Serial Number	:	Charging weight (kg) R407C	:..
Year of construction	:		

START-UP AND SHUT DOWN

- ➤ Start-up by switching on the circuit breaker of the power circuit. The operation of the water chiller is then controlled by the Digital Display Controller.
- ➤ Shut-down by switching off the controller and the circuit breaker of the power circuit.

WARNINGS

Emergency shut down : Switch off the **circuit breaker** located on ....

....

....

Air inlet and outlet : Always keep the air inlet and outlet free to obtain the maximum cooling capacity and to prevent damage to the installation.

Refrigerant charge : Use refrigerant R407C only.

First aid : In case of injuries or accidents immediately inform:

- ➤ **Company management** : **Phone**......................................
- ➤ **Emergency physician** : **Phone**......................................
- ➤ **Fire service** : **Phone**......................................

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DAIKIN EUROPE N.V.

Zandvoordestraat 300, B-8400 Oostende, Belgium

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